

Jan 2018

Making Education Syllabus

NYU Abu Dhabi
Interactive Media Program
IM-UH 2120

Spring 2018 Regional Seminar
IM “Media & Design Thinking” Cluster

Prerequisites: Intro to IM (IM-UH 1001), Comm Lab (IM-UH 1002) or Instructor Approval
Credit Hours: 4 units

Instructor: Craig Protzel
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Class Time: Mon 11:50 - 13:05 & Wed 11:50 - 14:30
Classroom: IM Lab Rm. 029

Course Description:

Making Education is a regional seminar course that will focus on education theory, instructional design, creative collaboration, and production of site-specific “maker” learning materials. Rooted in the Interactive Media culture of openness, accessibility and making, students will be challenged to thoughtfully navigate the education system in Kathmandu, Nepal and meaningfully effect learning opportunities in collaboration with our local partner organization. Iterative design cycles and project-based work will be paired with semi-formal research, theoretical analysis, ethnographic interviews, reflective writing, and project documentation. By researching, investigating, and applying creative educational models, students will experience a unique opportunity to apply the processes and principles of the Interactive Media Program onto a real-world use case. Ideally, a combination of making, teaching, and learning will result in insights that are both personally significant, locally relevant, and globally transferable. This course does involve a week-long Spring Break trip to Kathmandu, Nepal and a formal commitment to engage with our local partners.

The course will run in direct collaboration with the Karkhana Education Organization, based in Kathmandu, Nepal. Over the course of the semester, students will work in multi-disciplinary teams each paired directly with a Karkhana “Maker Mentor” who is actively involved in the Kathmandu secondary-school educational space. Student teams will collaboratively design and produce sustainable self-directed learning materials that appropriately address a range of site-specific constraints. In the process, students will gain comprehensive first-hand exposure to the public and private education system in Kathmandu, Nepal.

Leveraging the diversity of educational backgrounds at NYU Abu Dhabi, students will be expected to share their own secondary-school experiences and perspectives to enrich group discourse and foster innovative collaborations within the course. Students will also be expected to conduct interviews, work across disciplines, and leverage any relevant Interactive Media program experience. One of the main questions posed will be whether it is possible to design effective Interactive Media curriculum that affords valuable self-directed learning opportunities. While technical skills will be incorporated, the course will not

focus on introducing new technologies but instead will spend a majority of the time investigating and applying creative models for both teaching and learning.

Learning Outcomes:

- Cultivate a basic understanding of a range of theoretical approaches to both learning and teaching and their role in contemporary education systems
- Gain first-hand real-world experience investigating, analyzing, and effecting an education system in a meaningful, mindful, and sustainable fashion
- Develop ability to conduct ethnographic, person-centered interviews that focus on deep listening and ethical collection of knowledge
- Produce self-directed learning resources based on specific design constraints and educational objectives.
- Develop innovative and creative instructional design skills transferable to education systems around the world
- Gain valuable collaborative experience working directly with peers and external stakeholders

Teaching Methodology:

This course will combine both practice-based “active learning” sessions with seminar style theoretical discussions. Students will be expected to produce project work, write papers, contribute to class discussion, share work, and offer support to one another.

Maker-Mentors:

Student groups will also be paired with a Maker Mentor who works at Karkhana. This person will act as a “member” of your group and will represent your team on the ground in Kathmandu. You will be expected to communicate directly with your assigned Maker Mentor and actively engage them in your work in terms of direction, feedback and support.

Grading:

- **Attendance - 10%**
- **Participation - 10%**
 - Contribute to class discussions
 - Share personal experiences and perspectives
 - Raise questions
 - Actively engage with student group and Karkhana Org
 - Present work in class
- **Homework Assignments - 15%**
 - Reading
 - Blog Posts
 - Project Exercises
 - Documentation
- **Papers - 30%**
 - Initial Research Paper with Interview (10%)
 - Post-Trip Reflection Paper (10%)
 - Final Analysis Paper (10%)
- **Projects - 30%**

- Prototype Kits and Lesson Plans (15%)
- Final "Tool Kit" project (15%)
- **Peer Review - 5%**

Readings:

Papert, Seymour, Mindstorms (Basic Books, 1993)
 IDEO, Design Research Ethics (2015)
 All other readings will be distributed digitally.

Main Assignments:

- Initial Research Paper - interviews at both NYUAD and Karkhana
- Mid-term Project - prototype kit + lesson plan
- Post-Trip Reflection Paper - lessons learned, plan for remainder of semester
- Final Analysis Paper - description of final project, explain motivations and support for decisions
- Final Project - Self-Guided Learning Tool Kit + Lessons

Attendance:

- Students are expected to attend ALL classes and actively engage in ALL class discussions, exercises, and activities.
- Be on time - for class, for assignments, for meetings. Habitual lateness will not be tolerated.
- If you know you are going to be late or absent due to illness or other circumstances, please email me in advance. If an emergency occurs, please let me know as soon as you can.
- Unexcused absences or habitual lateness will negatively impact your final grade for the class:
 - Being more than 15 minutes late to class will result in 1 percentage point off your Attendance Grade each time this occurs.
 - Each unexcused absence will result in 2 percentage points off your Attendance Grade.
 - More than 2 unexcused absences will result in an entire lower overall letter grade.
 - More than 4 unexcused absences will result in an F in the class.

Participation:

- Sustained in class participation that demonstrates careful reading and reviewing of all materials is a requirement for succeeding in this course. Participating during class helps me get to know you as an individual and keep track of your progress. It also provides you and your classmates greater opportunities to learn from each other.
- Ask questions. If you do not ask questions, I can only assume you understand the material completely.
- Be prepared to work in groups on assignments and be an active contributor to your group.
- All homework assignments must be turned in on time. For each day a homework assignment is late, it will result in 1 percentage points deducted from your Homework Grade.
- All project assignments must be turned in on time. For each day a project assignment is late, it will result in 5 percentage points deducted from your Project Grade.
- You are expected to present your work in class. Explaining your work to other people is a great way to better understand the material and answer questions for yourself.
- Communicate with me and let me know if you have any concerns pertaining to the course. If you would like extra help or additional instruction, please let me know. You can email me, sign up for office hours, speak with me before class or after class, or all of the above.

NYUAD Academic Integrity:

NYU Abu Dhabi expects its students to adhere to the highest possible standards of scholarship and academic conduct. Students should be aware that engaging in behaviors that violate the standards of academic integrity will be subject to review and may face the imposition of penalties in accordance with the procedures set out in the [NYUAD Policy](#)

NYUAD Community's Commitment to Integrity:

At NYU Abu Dhabi, a commitment to excellence, fairness, honesty, and respect within and outside the classroom is essential to maintaining the integrity of our community. By accepting membership in this community, students, faculty, and staff take responsibility for demonstrating these values in their own conduct and for recognizing and supporting these values in others. In turn, these values will create a campus climate that encourages the free exchange of ideas, promotes scholarly excellence through active and creative thought, and allows community members to achieve and be recognized for achieving their highest potential.

SCHEDULE:

WEEKS 01 - 03: Learning Theory & Instructional Design
WEEKS 04 - 07: Kathmandu, Karkhana Org, & Ethnography
— SPRING BREAK TRIP —
WEEKS 08 - 11: Post-trip Reflection & Production Cycle
WEEKS 12 - 14: Final Production Cycle & Analysis

WEEK 1**75 min class: Pedagogy**

- General Course Introduction
- Story behind the Class
- Student introductions
- Activity: "How is learning like" - this activity helps activate student thinking about pedagogy by asking how learning is like various objects.
 - Mind map / brainstorming
 - Hands -> Mind
 - Physical Objects
 - Discussion on what learning means for them - pose questions to the group
 - Favorite teacher - what did she do
 - Memorable experience -
 - Common aspects tied to learning - themes, methods, approaches
- **Post Class**
 - Berger, R. (2003). Introduction. In *An ethic of excellence: Building a culture of craftsmanship with students* (1-12). Portsmouth, NH: Heinemann.
 - Smith, F. (1988). Ch. 1 Joining the literacy club. In *Joining the literacy club*. Portsmouth, NH: Heinemann.
 - Watch "Changing Educational Paradigms"
https://www.ted.com/talks/ken_robinson_changing_education_paradigms

150 min class: Thinking about Thinking

- Skype with Hasin & Sakar
- Discussion on previous readings

- Activity: Zoom In
 - Image frames, Exposed the image
 - Project Zero
 - Theme of Image
- **Post Class**
 - Ritchhart, R., Church, M., & Morrison, K. (2011). Unpacking thinking. In *Making thinking visible* (3-8, 11-14). San Francisco, CA: Jossey-Bass.
 - Smith, F. (1988). Ch.4 Learning to be a critical thinker. In *Joining the literacy club*. Portsmouth, NH: Heinemann
 - Smith, F. (1988). Ch.5 Collaboration in the classroom. In *Joining the literacy club*. Portsmouth, NH: Heinemann
 - 200-400 word reflection on class, discussion + relationship to reading. In the reflection, describe your most memorable non-school educational experience.

WEEK 2

75 min class: Projects and Power

- Discussion on previous readings
- Activity: "My Favorite Project" - students will reflect and document the elements of project driven learning that they enjoyed the most
- **Post Class**
 - Stager, G. & Martinez, S. (2013). What makes a good project? In *Invent to learn: Making, tinkering, and engineering in the classroom* (58-67). Torrance, CA: Constructing Modern Knowledge Press.
 - Some youtube videos with good projects + Massimo's talk about Arduinos

150 min class: Iteration

- Discussion on previous readings
- Activity: "TMPI (Think Make Play Improve) with balloon powered cars" - this activity involves students repeatedly building balloon powered cars to see the benefits of iteration
- **Post Class**
 - Berger, R. (2003). Multiple Drafts. In *An Ethic of Excellence: Building a culture of craftsmanship with students* (87-92). Portsmouth, NH: Heinemann.
 - Khun, S. (2001). Learning from the architecture studio: implications for project-based pedagogy. *International Journal of Engineering Education*, 17.4-5, 349-352.
 - Blikstein, P. (2008). *Travels in Troy with Freire: Technology as an Agent for Emancipation*. In Noguera, P. and Torres, C. A. (Eds.), *Paulo Freire: the possible dream*. Rotterdam, Netherlands: Sense.
 - 250 word reflection on class + relationship to readings

WEEK 3

75 min class: Introducing the Design Challenge

- Discussion on previous readings
- Examining the project brief and the kit
- **Post Class**
 - Collins, A. (2006). Cognitive apprenticeship. In R. Keith Sawyer (Ed.), *The Cambridge handbook of the learning sciences* (47-58). New York, NY: Cambridge University Press.

- Introduction to Karkhana Research Team's annotated bibliography on Cognitive Apprenticeship
- Prepare questions for Karkhana teachers on project brief etc

150 min class: Connect with Karkhana

- **Call with Karkhana teacher to discuss project brief**
- Discussion on all previous readings in context of the design brief
 - Why were these readings and ideas chosen as the set up?
 - What are critical elements here etc.
- Initial Interests
- **Post Class**
 - Watch Neil Postman Lecture "The Surrender of Culture to Technology" (<https://www.youtube.com/watch?v=h1rv7DIHIIIE>) (75 mins)
 - Research self-directed learning projects.
 - Create critical presentation, should include positive and negative analysis
 - Papert "Mindstorms" Intro + Chapter 1

WEEK 4

75 min class: Show and Tell

- Present projects
- Analyze projects in context of previous readings
- Set Initial Groups
- **Post Class**
 - Readings on self-directed learning
 - Think of some project ideas

150 min class: Hand-storming

- Brainstorm ideas in small groups. Use 3-2-1 to pick project to do
<http://dipeshwor.com.np/logo-design-using-3-2-1/>
- Work with project team on rapid prototyping of project ideas
- **Ethnographic Interview Workshop Part I (Carol Brandt)**
- **Post Class**
 - Work on project at your own pace
 - Do some Nepal research
 - Possible "Loot" Screening
 - In Search of the Riyals
 - Thamel Dark Star - Ravi
 - Introduced to Maker Mentor
 - Do interview with Maker Mentor
 - Ask about schools & education system
 - Tabulate interview into sharing format

WEEK 5

75 min class: Show and Tell

- Present findings from Nepal conversation in small groups
- OPTIONAL: Refine project idea more

- Post Class
 - Readings on Kathmandu and Nepal
 - Pramod Bhatta's essays

150 min class: Project Studio Time

- Work on Prototype 1
- Post Class
 - Readings on education in Nepal
 - Interview with NYUAD Nepali Community
 - Work on prototype

WEEK 6

75 min class: Show and Tell

- Peer critique of prototypes + brainstorm ideas for next step
- Post Class
 - Review Karkhana lesson plans

150 min class: Show and Tell (Hasin Visit 1)

- Discuss Karkhana lesson plans and how they influence your prototype idea
- Work on prototype idea in groups
- Post Class
 - Work on prototype idea & document work
 - Write 1000 word Research Paper incorporating theoretical material & interviews

WEEK 7

75 min class: Challenges of a 'Progressive' Education in the Nepali context (Hasin Viist 2)

- Small group discussion on readings
- Interactions and question with Karkhana on how they are addressing the challenges
- Post Class
 - Revise prototype idea based on group discussions

150 min class: Work Session

- Build prototype based on revised idea
- **Ethnographic Interview Workshop Part II (Carol Brandt)**
- Post Class
 - Share prototype idea with Maker Mentor and discuss strategies to implement and test in Nepal

SPRING BREAK WEEK

Projected trip dates: Tuesday March 13th - Monday March 19th

WEEK 8

75 min class: Observations & Reflections

- Post-trip Discussion
 - What I saw & What it means
 - Attempt to put the trip in context and how it relates to the project brief.
- Begin to map out reflection paper

- Post Class
 - Outline Nepal reflection paper & submit outline
 - Generate new ideas + avenues of progress for your prototype
 - Make 3 week Production Cycle Plan

150 mins:

- Share plans for next Production Cycle
- Discuss and critique ideas
- Skype call with Karkhana
- Group Work
- Post Class
 - Work on project
 - Write 1000 word reflection on Nepal trip and how it changed your understanding of the project brief

WEEK 9

- Re-connect with Maker Mentor
- Share updated project plans
- Work on project

WEEK 10

- Share initial deliverables with Maker Mentor

WEEK 11

- Transfer project execution to Maker Mentor

WEEK 12

- Call with Maker Mentor to get feedback from user testing
- Begin reworking project based on Maker Mentor & user testing feedback

WEEK 13

- Continue reworking project based on Maker Mentor & user testing feedback

WEEK 14

- Share final project and documentation with Karkhana and Maker Mentor

FINALS WEEK

- Final Analysis Paper Due